

REMARKS

Applicant is in receipt of the Office Action mailed May 21, 2003. Claims 74 – 102 were withdrawn from consideration due to being drawn to a non-elected invention. Applicant accepts without traverse the election to prosecute claims 1 – 73.

Claims 1 – 73 were rejected. Claims 33 – 73 have been canceled, and new claims 103 – 157 have been added. Claims 1 – 32 and 103 – 157 are currently pending in the application.

Claims 1 – 73 were rejected under 35 U.S.C. 102(b) as being anticipated by Shaheen et al., “Remote Laboratory Experiment”, 1998. Applicant respectfully traverses this rejection.

Shaheen relates generally to a system for remotely accessing a Bytronic Process Control unit, also referred to as a process rig, via the Internet. Using a web browser, the user can log in and post parameters from a remote client to a LabVIEW G web server connected to the process rig via a PLC control module.

Shaheen describes one technique in which an HTML form is generated for parameter input. The user on the client side can input the desired parameters in the HTML form and then press a submit button to submit the parameters to a VI on the LabVIEW G web server (p. 1327, first column). After checking that the parameters are valid and properly formatted, the parameters are bundled and eventually passed to another VI that initiates execution of the experiment in accordance with the parameters. A snap shot of the control panel showing output data of this VI in the JPEG image format is then returned to the client side (p. 1327, second column).

Shaheen also describes a technique in which an image of the control panel is generated and refreshed every one second using a server push method. The user on the client side can click on the image, and the coordinates of the click are read and compared with a set of predefined coordinates so that the appropriate action is taken (p. 1328 second column – p. 1329 first column).

In contrast, new claim 103 recites in part,

providing a description of the user interface of the graphical program to a second computer during said executing; and
displaying the user interface of the graphical program on the second computer, based on the description;
wherein the user interface displayed on the second computer is useable by a user to interact with the block diagram executing on the first computer as if the block diagram were executing on the second computer.

Thus, a description of the user interface of the graphical program is provided to the second computer. The user interface is displayed on the second computer, based on the description, and allows the user to interact with the block diagram executing on the first computer as if the block diagram were executing on the second computer.

This is in contrast to Shaheen's system in which an image is provided to a client computer, not a description of a user interface. As described above, this image is effectively a snap shot that may be periodically refreshed. The user's experience of interacting with a periodically refreshed snap shot is not at all the same as if the user were interacting with the user interface of a graphical program executing on the user's computer.

As per claim 105, the claim recites in part, "providing output data from the block diagram executing on the first computer to the second computer". On the contrary, in Shaheen's system an image indicative of output data is returned to a client computer, but not the output data itself.

As per claim 106, the claim recites, "wherein the output data is provided to the second computer separately from the description of the user interface". As noted above, Shaheen does not teach providing a description of a user interface and does not teach providing output data, and thus also does not teach providing these two things separately from each other.

As per claim 107, the claim recites in part, "wherein the description of the user interface is not provided to the second computer each time output data is provided to the second computer". Thus, the description of the user interface may be provided to the second computer a single time. Thereafter, output data from the block diagram executing on the first computer may be provided to the second computer and displayed in the user interface displayed on the second computer, without re-providing the description of the

user interface. In many applications, this method may be significantly more efficient than periodically providing image snap shots to a client computer, as taught in Shaheen.

As per claim 108, the claim recites in part, “continuously updating the user interface displayed on the second computer to display the continuously produced output data”. This would not be possible in Shaheen’s system, where an entire image must be provided to the client computer such that the image can at best be refreshed at periodic intervals rather than continuously.

As per claim 110, the claim recites, “receiving input data to the user interface displayed on the second computer” and “providing the input data to the block diagram executing on the first computer”. On the contrary, Shaheen teaches a technique in which coordinates identifying where a user clicks within an image are compared with a set of predefined coordinates. Thus, the user’s actual input is simply used to determine an appropriate action based on the coordinates but is not ultimately used as actual input to the VI.

As noted above, Shaheen also teaches a technique in which a user can provide actual input to a VI, but this input is received to an HTML form, not to a user interface of a graphical program. As described on p. 1328, first column, the HTML form is generated during execution of the exp5cgi.vi CGI. This HTML form is used for parameter input but is not a user interface of a VI itself. Moreover, the user’s experience of interacting with this HTML form is not at all the same as if the user were interacting with the user interface of a graphical program executing on the user’s computer. For example, after the user provides the parameters to the HTML form, the user must press a submit button to actually submit the parameters.

Applicant thus submits that claims 103 – 131 are allowable for at least the reasons given above. Applicant further submits that claims 1 – 32 and 132 – 157 are also allowable for reasons similar to those discussed above. For example, claim 1 recites in part, “receiving a description of a user interface associated with the graphical program” and “displaying a user interface based on the description received”. As discussed above, Shaheen does not teach the concept of receiving a description of a user interface or displaying a user interface based on a description. Taking claim 6 as another exemplary

claim, Shaheen also does not teach the concept of “receiving a data update” and “updating the user interface based on the data update received,” as discussed above.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-38601/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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